

REMARKS

1. Claim 1 has been amended to recite “and further comprising one or more selectivity enhancing dopants selected from rhenium, molybdenum, and tungsten.” Claims 3 and 19 have also been amended to improve consistency with amended Claim 1.

2. Claim 4 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Applicants respectfully submit that claims 4 and 20 have been amended to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Applicants respectfully request the rejection under 35 U.S.C. § 112, second paragraph, be withdrawn.

2. Claims 1, 3, 4, 6-17, and 19-25 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of co-pending Application No. 10/607,346. A terminal disclaimer is being filed concurrently with this response letter. Applicants respectfully request the provisional rejection under the judicially created doctrine of obviousness-type double patenting be withdrawn.

3. Claims 1-25 were rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 4,007,135 (‘135) Hayden et al. This rejection is respectfully traversed. Applicants respectfully submit that the Examiner has not satisfied the burden of proof required to maintain this rejection under 35 U.S.C. § 102(b). For a prior art reference to anticipate a set of claims, each and every limitation of the claims must be disclosed in that reference. *Glaxo v. Novopharm*, 34 U.S.P.Q.2d 1565 (Fed. Cir. 1995).

Applicants’ claimed method in the present application relates to a supported highly selective epoxidation catalyst comprising silver in a quantity of at most 0.17 g per m² surface

area of the support and further comprising one or more selectivity enhancing dopants selected from rhenium, molybdenum and tungsten. The catalyst, or a precursor of the catalyst containing silver in cationic form, is contacted with a feed comprising oxygen at a catalyst temperature above 250 °C for a duration of up to 150 hours, and subsequently the catalyst temperature is decreased to a value of at most 250 °C.

The quantity of silver relative to the surface area of the support reflects a relatively low density of silver on the support surface (hereinafter “silver density”). As explained in the application text (page 7, line 28 – page 8, line 13), the present invention may specifically be applicable to epoxidation catalysts having a selectivity enhancing dopant (as defined) and having a relatively low silver density. Catalysts having a higher silver density are preferably not subjected to the treatment of the present invention (cf. application text, page 4, lines 3-8).

The ‘135 reference provides silver-based catalysts containing certain metal promoters deposited on a support having certain characteristics. These supported silver-based catalysts are utilized for the production of alkylene oxides. *U.S. Pat. No. 4,007,135* at col. 1, l. 20-41. The ‘135 reference discloses decomposing the silver compound used to impregnate the support by heating. *Id.* at col. 4, l. 11-23. There is no generic disclosure in the ‘135 reference disclosing the combination of features as specified in Claim 1. The examples of the ‘135 reference also do not disclose the combination of features as specified in Claim 1. No rhenium, molybdenum or tungsten dopants are employed in the examples of the ‘135 reference.

Thus, the ‘135 reference does not disclose, teach or suggest the element of the combination of silver density, selectivity enhancing dopants and heating of the silver-containing catalyst, or precursor of the catalyst containing silver in cationic form, in the presence of oxygen at a certain temperature for certain period of time as specified in claim 1. It is respectfully submitted that this combination has been made for the very first time in the

context of the present invention, and that this combination is an explicit element of the wording of the claims now under consideration. Therefore, the '135 reference does not disclose each and every limitation of Claim 1. Claims 2-25 ultimately depend from Claim 1, and therefore are also not anticipated by the '135 reference. In view of the above, Applicants respectfully request that the rejection based upon anticipation be withdrawn.

In the alternative Claims 1-25 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hayden et al. '135. This rejection is respectfully traversed. The MPEP § 2143 states:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

The '135 reference teaches improved silver-based catalysts which result from utilizing certain metal promoters and supports having certain characteristics. *U.S. Pat. No. 4,007,135* at col. 1, l. 20-41; col. 2, l. 16-31. The examples in the '135 reference show the performance of silver-based catalysts prepared according to the invention claimed in the '135 reference. None of the examples in the '135 reference disclose the use of rhenium, molybdenum or tungsten. Thus, there is no suggestion or motivation to modify the '135 reference to improve catalyst performance by using the combination of low silver densities, certain selectivity enhancing dopants and heating in the presence of oxygen at a certain temperature for a certain period of time as taught by the present invention.

Additionally, there is no reasonable expectation of success. The '135 reference discloses many possible promoters as well as wide ranges for silver loadings, support surface

areas, and decomposition temperatures. *Id.* at col. 1, l. 20-41; col. 1, l. 55-56; col. 2, l. 16-31; col. 5, l. 17-27. As discussed above, the examples of the '135 reference do not disclose the use of rhenium, molybdenum or tungsten as promoters. Further, the '135 reference does not suggest any relationship between improvements in the catalyst and the combination of silver density, selectivity enhancing dopants and heating in the presence of oxygen at a certain temperature for a certain period of time as taught by the present invention.

Also, the '135 reference does not teach or suggest all the claim limitations. In particular, as indicated hereinbefore, the '135 reference does not teach or suggest the combination of silver density, selectivity enhancing dopants and heating of the silver-containing catalyst, or precursor of the catalyst containing silver in cationic form, in the presence of oxygen at a certain temperature for a certain period of time, as specified in the claims.

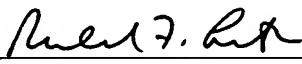
In view of these arguments, Applicants believe that a *prima facie* basis for obviousness has not been established for Claims 1-25 and respectfully request that the rejection be withdrawn.

CONCLUSION

Each of the rejections having been traversed, allowance of the claims of the present application is respectfully requested. If the Examiner would like to discuss this case with Applicants' attorney, the Examiner is invited to contact Richard Lemuth at the phone number below.

Respectfully submitted,

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